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Method of making photoresist compsn. with reduced solvent waste -  
comprising fractionation of polymeric binder resin(s) with supercritical  
fluid, and admixture of resin(s) with photoresist cpd(s).

Patent Assignee: OCG MICROELECTRONIC MATERIALS INC (OCGM-N)

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Number of Countries: 004 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Main IPC	Week
EP 727711	A2	19960821	EP 96300988	A	19960213	G03F-007/004	199638 B
JP 8248633	A	19960927	JP 9628793	A	19960216	G03F-007/032	199649

Priority Applications (No Kind Date): US 95390002 A 19950217

Patent Details:

Patent	Kind	Lang	Pg	Filing Notes	Application	Patent
EP 727711	A2	E	9			

Designated States (Regional): DE FR NL

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Abstract (Basic): EP 727711 A

A method of making a photoresist compsn. comprises:

(a) fractionating polymeric binder resin(s) with a supercritical fluid  
; and

(b) admixing or reacting the fractionated polymeric binder resin with  
photoresist cpd(s). (P).

Cpd. (P) comprises:

- (i) a photo [sic: photoactive] cpd.; and/or
- (ii) photo acid generator(s).

USE - Compsns. are esp. used in positive-working photoresist for  
processing of Si wafer or GaAs wafer to form semiconductor devices.

ADVANTAGE - Prodn. of solvent waste is reduced or eliminated. Photo acid  
generators (PAG) increase dissolution rate of photoresist films to make  
positive-tone photoimage. Pref. supercritical fluid (SCF) is CO2  
which is safe, non-toxic, inexpensive and readily commercially available.

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Title Terms: METHOD; PHOTORESIST ; COMPOSITION; REDUCE; SOLVENT; WASTE;  
COMPRISE; FRACTIONATE; POLYMERISE; BIND; RESIN; SUPERCRITICAL; FLUID;  
ADMIXED; RESIN; PHOTORESIST ; COMPOUND

Derwent Class: A21; A89; G06; L03; P84; U11

International Patent Class (Main): G03F-007/004; G03F-007/032

International Patent Class (Additional): C08L-061/06; G03F-007/039;

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File S gment: CPI; EPI; EngPI

## Photoresist compositions containing supercritical fluid fractionated polymeric binder resins

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Inventor(s): JEFFRIES ALFRED T III (US); TOUKHY MEDHAT A (US)  
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IPC Classification: G03F7/004  
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Equivalents: JP8248633  
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### Abstract

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A photoresist composition comprising either an admixture or a reaction product of: (a) at least one photosensitive compound selected from the group consisting of a photoactive compound, photo acid generators, and mixtures thereof; and (b) at least one polymeric binder resin fractionated with a supercritical fluid.

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